

ABSTRACT

The present invention provides a surface acoustic wave device that has a structure in which an insulating layer covers an IDT electrode and that can suppress degradation of characteristics due to undesired ripple, with a sufficient reflection coefficient of the IDT.

The surface acoustic wave device includes a piezoelectric substrate made of LiNbO_3 having an electromechanical coupling coefficient k whose square is 0.025 or more; at least one electrode that is made of a metal whose density is higher than that of Al or an alloy mainly containing the metal or that is composed of laminated films made of a metal whose density is higher than that of Al or an alloy mainly containing the metal and another metal, the electrode lying on the piezoelectric substrate; a first insulating layer lying in a region other than a region where the at least one electrode lies, the thickness of the first insulating layer being almost equal to that of the electrode; and a second insulating layer covering the electrode and the first insulating layer. The density of the electrode is more than 1.5 times higher than that of the first insulating layer.